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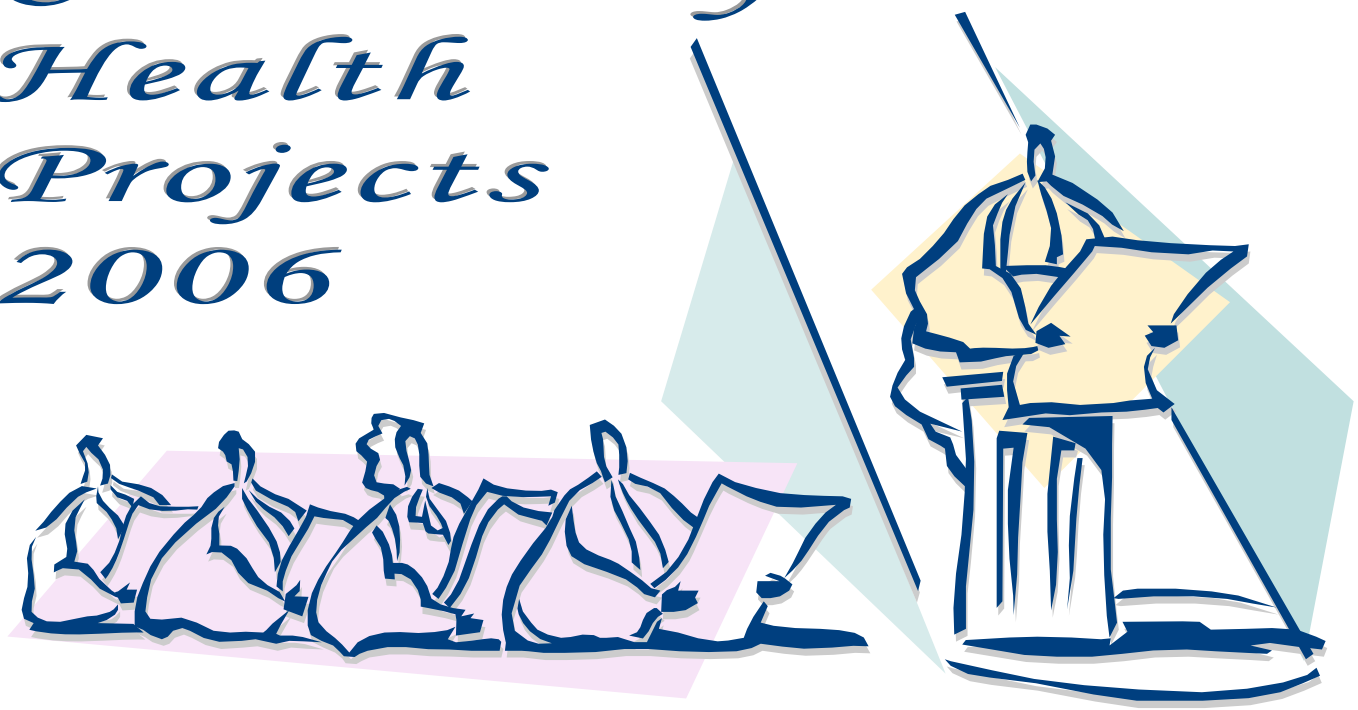
DENTAL PUBLIC HEALTH
Faculty of Dentistry

Oral health care for moderately mentally-retarded teenagers

Community Health Projects 2006



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Oral Health Care for Moderately Mentally-retarded Teenagers

Group 4.1 (2005/06):

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Dr. WONG Chun Mei, May

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1. ABSTRACTS

Studies reported that children with mental handicaps had a greater amount of untreated decay, and more extracted teeth, than children without mental handicaps. In Hong Kong, the government and some voluntary organizations are providing dental services to mentally-retarded patients. However, patients have to go to their clinics, where the environment might become unfamiliar to the patients and this would increase the patients' anxiety and then compromise the dental treatments. The aim of this project was to provide an outreach dental care service for the mentally retarded teenagers in their school where they are all very familiar with.

The project was taken place at TWGHs Kwan Fong Kai Chi School. A total of 35 secondary school teenagers, aged range from 13 to 18, participated in this project. The project was divided into 4 parts, including an oral health education program about primary oral health care, a clinical examination, a questionnaire survey and delivery of treatment, including topical fluoride application and fissure sealant, and restorative treatment were given accordingly by using portable dental equipments.

Questionnaire results showed that about half of the teenagers performed toothbrushing on their own with about 40% of them brushed once and 40% brushed twice daily. Majority of them (71%) had snacks in between meals. Nearly half of them perceived having halitosis and a quarter perceived not having any dental problems. From the clinical examination, the oral hygiene of over 80% of the teenagers was regarded as unsatisfactory. The mean DMFT of the teenagers was 2.22. Topical fluoride varnish was applied onto the teeth of 32 teenagers while scaling was provided to 14 teenagers. 17 teenagers had received fissure sealants and a total of 43 teeth were sealed. A total of 4 ART restorations were placed in 4 teenagers.

In conclusion, the outreach service was satisfactorily delivered, and was appreciated by the service recipients. Future outreach service was welcomed. This group of people required more attention to their dental need. Special dental care service provided by government was recommended, or the School Dental Care Service under the Department of Health should be extended to meet the demand of these people.

2. INTRODUCTION

In Hong Kong, most primary school children, about 436 000, including the special need group receive annual dental check-ups by the School Dental Care Services (SDCS) under the Department of Health, Hong Kong SAR Government. These services include the oral health education, oral examination, preventive treatments, basic dental treatments and emergency services for primary school children only [1].

Studies which have investigated the dental health of children with mentally handicaps reported that children with mental handicaps had a greater amount of untreated decay, and more extracted teeth, than children without mental handicaps [2, 3, 4]. However when there were improved and coordinated services existed to carry out total dental care for handicapped children, the children would have 'a significant improvement in dental health' and a large reduction in the numbers of untreated teeth and of missing teeth [2]. Therefore, it is important for the dental practitioners to provide continuous dental care to the mentally-retarded children and adults who are not included in the SDCS.

In order to provide dental services to the mentally-retarded patients who are not medically compromised, routine dental set-up and staffs should be sufficient provided that the patients are co-operative. However, as most of the mentally-retarded patients are medically compromised and un-cooperative, special management, such as the use of sedation or general anaesthesia may be necessary [5]. In addition, treatments delivery to these patients could be more time consuming and less cost effective, therefore some dentists might be unwilling to provide dental services to patients with mental retardation [3]. Other barriers in seeking dental treatment included financial problem of patients and treatment inaccessibility [6]. In Hong Kong, the government and some voluntary organizations (e.g. Hong Kong St. John's ambulance) are providing dental services to mentally-retarded patients [7, 8]. However, patients have to go to their clinics, where the environment might become unfamiliar to the patients and this would increase the patients' anxiety and then compromise the dental treatments. With the above reasons, we would like to provide an outreach dental care service for the mentally retarded teenagers in their school where they are all very familiar with.

In addition to the provision of dental care service, the maintenance of oral hygiene is important for preventing development of periodontal disease and dental caries. It has always been said that prevention is better than cure. So, this project also included an oral health education program for the teenagers. The teenagers, or at least their parents or care-takers should learn about their teeth, why and how they get decayed, the benefits of proper oral hygiene procedures and the importance of a proper diet. Hopefully this could help preventing the development of dental diseases and reduce the need of dental treatment.

3. AIMS AND OBJECTIVES:

The aim of this community health project was to provide basic dental care services to the moderately mentally-retarded teenagers in a special school.

The objectives were:

1) To examine and evaluate the dental treatment needs of the moderately mentally-retarded teenagers in a special school.
2) To provide an oral health education program to the moderately mentally-retarded teenagers, their parents and caretakers.
3) To deliver dental treatments to the moderately mentally-retarded teenagers in a special school.
4) To study the feasibility of outreach dental care service to moderately mentally-retarded teenagers.

4. MATERIALS AND METHODS

The project was divided into 4 parts, including an oral health education program about primary oral health care, a clinical examination, a questionnaire survey and delivery of treatment.

4.1. Selection of Subjects

The target group for this project was moderately mentally-retarded teenagers aged 13-18 years because they were out of the care from the School Dental Care Service (SDCS) provided by Department of Health, HKSAR Government.

There were totally 14 special schools for moderately mentally-retarded children and teenagers in Hong Kong. All of these schools were contacted and asked for their availability and interest in participating in the project. Tung Wah Group Hospitals Kwai Fong Kai Chi School (Appendix 1) was chosen because she has the largest number of teenagers within the targeted age group, and their available time matched the schedule of this project.

4.2. Project Preparation

Before the implementation of this community health project, a site visit to the school was scheduled. During the visit, the registered nurse in the school gave a short tour of the school to our group and our teacher advisor. The goal of the site visit was to check for the available resources provided by the school, as well as to discuss with the staffs from the school regarding the project implementation.

In the same visit, we have made our first contact with the teenagers, by giving such a contact may let them be more familiar with us and be more cooperative during the examination and treatment in the upcoming visits. It also helped us gaining some ideas in handling these teenagers, for instance, the approach that we have to use, areas that we may have to pay more attention to…etc.

After the meeting, a letter regarding the information about the community health project and consent form for the teenagers' participation were given to the parents/guardians of the teenagers (Appendix 2), which were collected before the clinical examination.

Questionnaires for the parents/guardians (Appendix 3) regarding the oral health hygiene practices of their children were also distributed and collected before the clinical examination.

A list of necessary portable equipments, hand instruments and treatment consumables needed (Appendix 4) for carrying out the dental examinations and treatments was prepared and the materials were collected.

Oral health education pamphlets (Appendix 5) that were appropriated for use in this project were collected from the Oral Health Education Unit (OHEU), Department of Health, HKSAR Government. These were for distribution to the staffs and the parents during the oral health education program. Oral hygiene demonstration aids (Appendix 6a), and suitable game sets (Appendix 6b) were borrowed also from OHEU, too. A criterion in choosing the game sets was the ease in understanding and playing, as well as matching the theme of our project. Out of those listed in the OHEU website, two of them were chosen.

Training on restoration using atraumatic restorative treatment (ART) technique[9] and fissure sealants was provided by the Professor in Dental Public Health, Faculty of Dentistry, The University of Hong Kong before the start of our project.

4.3. Oral Health Education Program

The program was scheduled on February 21, 2006 (Tuesday), one week prior to the clinical examination and treatment visits. It was divided into three parts: an oral health care talk, an oral hygiene instruction tutorial session and a game session.

A 30 minutes tailor-made oral health care talk was given to the teenagers, their parents and care-takers. PowerPoint slides with lots of attractive illustrations were presented in order to attract the teenagers' attention. The talk included the following topics:

- Causes of caries,
- Prevention of caries,
- Dietary advices,
- Toothbrushing technique with a live demonstration

After the talk, some questions were asked and souvenirs were given to those teenagers who could correctly answer the questions. The teenagers were then divided into three groups and took turns to either receive an oral hygiene instruction tutorial or play one of the two chosen games on a group basis by rotation.

In the oral hygiene instruction tutorial, each teenager was instructed individually about the basic toothbrushing technique using the large toothbrushing models borrowed from the OHEU, aiming at a quick refresh to them on what have been taught in the live demonstration. Two sets of game, one associated with toothbrushing and the other associated with the introduction of dental office were played with the teenagers.

4.4 Clinical Examination

Clinical examination of the teenagers was carried out at TWGHs Kwan Fong Kai Chi School on February 27, 2006 (Monday). During the clinical examination, two members of our student group acted as the examiners and another four members acted as chairside assistants. The clinical examination was carried out using Universal Infection control protocol, including the wearing of protective gowns, protective gloves, face masks and proper instrument sterilization using autoclaves.

During the clinical examination, a global assessment of the oral hygiene status of each teenager was made and gingival health was checked by gingival bleeding on gentle probing. Presence of calculus, the tooth status like presence of caries and restorations were also checked (Appendix 7).

After the examination, an individualized treatment plan was formulated and recorded. The treatment options available included:

- Scaling,
- Topical fluoride application,
- Fissure sealant,
- Restoration,
- Referral.

Fissure sealant was indicated for teeth with deep or sticky pits and fissures. Need for a filling was recorded when there was a carious cavity.

4.5 Dental Treatments

The indicated dental treatments were carried out at TWGHs Kwan Fong Kai Chi School on March 1, 2006 (Wednesday) and March 2, 2006 (Thursday). The following types of treatment were delivered:

1. Preventive treatment- fluoride varnish applications and fissure sealants
2. Periodontal treatment- scaling
3. Restorative treatment- ART with glass ionomer fillings

A varnish containing 2.26% sodium fluoride (Duraphat) was applied onto teeth that were judged to be at risk for caries and on initial caries lesions. Scaling was performed using hand instruments. Fissure sealants were placed on teeth with deep or sticky pits and fissures using the ART technique. The ART technique was also used to restore small carious lesions in the posterior teeth. This technique involved the removal of the carious tooth substances by hand excavation and restoration of the prepared cavity with a hand-mixed high-strength glass-ionomer material (Ketac-Molar Easymix, 3MEPSE).

After the completion of the treatments, a record sheet about the oral health status, the treatments provided and the need of referral for follow-up was given to the parents (Appendix 8).

4.6 Data Processing and Analysis

Data from the questionnaires were collected and the answers were counted for each question.

5. RESULTS

5.1 Questionnaire Results

35 questionnaires were distributed to the parents/guardians of the teenagers and all of them were returned. Background information of the teenagers is shown in Table 1, information regarding the dietary and toothbrushing habits is shown in Table 2. Table 3 shows the perceived dental problems of the subjects by their parents/ guardians.

The age of the teenagers ranged from 13 to 18 years old as shown in Table 1, among them, the male to female ratio was approximately 1 to 1. More than half of the teenagers (66%) had regular dental visits. Most of the teenagers (83%) received dental care in the government dental clinics, 9% and 6% of the teenagers visited private dental clinics and clinics run by the charity organizations respectively.

Table 1. Background information of the subjects (n = 35).

	No. of subjects (%)
Age	
13	5 (14%)
14	5 (14%)
15	8 (23)
16	7 (20%)
17	6 (17%)
18	4 (11%)
Gender	
Male	18 (51%)
Female	17 (49%)
Pattern of dental visit	
Regular	23 (66%)
Irregular	12 (34%)
Dental services received:	
Private dental clinics	3 (9%)
Government dental clinics	29 (83%)
Charity organization clinics	2 (6%)
Not reported	1 (3%)

About half of the teenagers (54%) performed toothbrushing on their own as shown in Table 2. For those who did not brush on their own, the reasons were poor manual dexterity (63%) and poor grip of toothbrushing technique (81%). For the toothbrushing frequency, 46% and 43% of the teenagers reported a frequency of once and twice a day respectively. And 6% of them brush more than two times a day. Only 2 of them (6%) did not brush at all.

Majority of the teenagers (71%) had snacks in between meals. Among them, 29% and 36% snacked once and twice a day respectively, 6% of the teenagers even snacked more than 2 times a day. For the types of snacks they consumed (Table 2), majority of the teenagers chose sugary food/sweets and juices/soft drinks as their choices, with 74% and 80% of the teenagers consumed at least once a week respectively.

Questions regarding the perceived dental problem(s) of the teenagers and the problems they came across during dental treatments were also asked (Table 3). Nearly half of the subjects (49%) perceived the problem of halitosis. Dental caries and periodontal diseases were also reported 31% and 17% respectively. Only 29% of the parents/guardians believed their children did not have any dental problems.

A question about the problems the parents/guardians faced when their children received dental treatment was asked. Over half of them (57%) felt that their children could not follow the instructions given by the dentist, 20% of the parents/guardians thought that the dental visit was too expensive, and 11% thought that the facilities in dental clinic could not match the needs of their children. Only about one third of them thought that there was no problem experienced at all.

Table 2. Information on toothbrushing and dietary habits of the subjects (n = 35).

	No. of subjects (%)
Toothbrushing performed by the teenagers	
Yes	19 (54%)
No	16 (46%)
Reason for not brushing on their own	
(more than one answer allowed)	
Poor grip of toothbrushing technique	13 (81%)
Poor manual dexterity	10 (63%)
Daily toothbrushing frequency	
None/ Occasionally	2 (6%)
Once a day	16 (45%)
Twice a day	15 (43%)
More than twice a day	2 (6%)
Daily snacks intake frequency	
None	10 (29%)
Once	10 (29%)
Twice	13 (36%)
More than two times	2 (6%)
Sugary food/ sweets intake frequency	
None/ little	9 (26%)
Once or twice per week	15 (43%)
Once daily	5 (14%)
Several times per day	6 (17%)
Potato chips/peanuts intake frequency	
None/ little	17 (49%)
Once or twice per week	11 (31%)
Once daily	3 (9%)
Several times per day	4 (11%)
Juices/soft drinks intake frequency	
None/ little	7 (20%)
Once or twice per week	20 (58%)
Once daily	4 (11%)
Several times per day	4 (11%)

Table 3. Perceived dental problems and problems experienced during dental visits (n = 35).

	No. of subjects (%)
Perceived dental problems	
(more than one answer allowed)	
No dental problem	10 (29%)
Periodontal disease	6 (17 %)
Dental caries	11 (31%)
Halitosis	17 (49%)
Others	3 (9%)
Problems experienced during dental visits	
(more than one answer allowed)	
No problem experienced	12 (34%)
Cannot follow the instructions given by dentist	20 (57%)
Facilities in clinic cannot match the needs of patient	4 (11%)
Too expensive	7 (20%)
Others	1 (3%)

5.2 Clinical Examination

The oral hygiene of over 80% of the teenagers were regarded as unsatisfactory (Table 4), mainly based on the amount of visible plaque that were seen. For the calculus level, only 21% of the teenagers apparently having no supragingival calculus, and the majority of them (49%) had slight amount of calculus. Bleeding was used as the index in grading the gingival inflammation, over 80% of the teenagers got moderate level of the inflammation.

For the DMFT, the mean numbers of decayed, missing and filled teeth were 0.58, 0.73 and 0.91 respectively. And the mean DMFT of the teenagers was 2.22.

Retained root of primary dentition was found in two teenagers.

Table 4. Oral hygiene and oral health status (n = 33).

	No. of participants (%)
Oral hygiene	
Satisfactory	6 (18%)
Unsatisfactory	27 (82%)
Amount of calculus (supragingival)	
No	7 (21%)
Slight	16(49%)
Moderate	10 (30%)
Gingival inflammation	
Slight	2 (6%)
Moderate	27 (82%)
Severe	4 (12%)
DMFT	
Mean no of decayed teeth	0.58
Mean no of missing teeth	0.73
Mean no of filled teeth	0.91
Mean DMFT	2.22

5.3 Dental Treatment Provided

In this project, topical fluoride varnish was applied onto the teeth of 32 teenagers while scaling was provided to 14 teenagers (Table 5). 17 teenagers had received fissure sealants and a total of 43 teeth were sealed. We had placed a total of 4 ART restorations in four teenagers.

Since some of the teenagers were uncooperative during the treatment even after repeated trials, we could not provide all the dental treatments that we had planned originally (Table 5).

Table 5. Types and number of dental treatments planned and provided.

Type of dental treatment	Number of subjects	
	Treatment planned	Treatment done
Fluoride varnish	33	32
Scaling	19	14
Fissure sealant	20 (48)	17 (43)
ART restoration	5 (5)	4 (4)

* Number in parenthesis is the number of teeth treated

6. DISCUSSIONS

6.1. Project Preparation and Site-Visit

The main objective of our group's community oral health project was to deliver appropriate oral health care services to the teenagers who were not covered by the government School Dental Care Service (SDCS). In our meeting with the registered nurse of the TWGHs Kwan Fong Kai Chi School, she said there would be a private dentist visiting their school once a year, and providing dental services to 15 teenagers each time. However, due to the teenagers' anxiety and time restriction, most of them did not receive treatment. Therefore, she appreciated very much our outreach dental services and she agreed to provide help with her maximum effort, such as providing staffs and volunteers to help controlling the patients.

There were two purposes for the site-visit. The first one was to reduce the teenagers' fear to us by greeting them before the examination and treatment. This was achieved with the help of the registered nurse in introducing us to the teenagers and telling them we were her friends. The second purpose was to know more about them by visiting them during their lessons and by observing how their teachers communicated with them. Teachers tended to use simple words and short sentences for communication.

6.2. Oral Health Education Program

Oral health care talk

Basic facts about the teeth and caries prevention were given. The style of delivery through PowerPoint slides was interesting to the teenagers, their parents, care-takers and staffs. With the advice from the registered nurse, the moderately mentally-retarded teenagers might not read very well but still be able to understand the concepts or information. Thus we incorporated plenty of visual aids to make the teenagers getting the message much more easily. A lot of attractive illustrations or pictures, diagrams were added in the PowerPoint presentation. It effectively delivered the information on the correct dietary habits and the causes of tooth decay as the teenagers gave correct answers to the questions that followed the talk.

The teenagers showed great interest in the live demonstration about the toothbrushing technique. Both parents and care-takers appreciated the live demonstration as well that it helped them to have a better understanding on how to brush properly.

Oral Hygiene Instruction Tutorial

In the tutorial, the teenagers were divided in 3 smaller groups, so that each of them can have more participation. Within the group, we demonstrated once again on how to brush and then let them brush on the model one by one following our instructions. Due to the mental retardation, we had to teach them repeatedly, and finally, most of them could brush properly. During the teaching, we had to set up some clues for them like “brush each group of teeth 10 times” and counted together with them.

Games

The two games we had prepared aroused great enthusiasm. In the first game, they learnt how to brush properly and distinguished the “dirty things” on the teeth. In the second game, they got more familiar with the dental clinic set-up and dressing-codes of a dentist. Most of the teachers, care-takers and parents appreciated the second game a lot, as they believed that this could introduce the dental clinic environment to the teenagers and reduce their anxiety during their future dental visits.

6.3. Clinical Examination

In the clinical examination, the oral hygiene status of teenagers was unsatisfactory with gingival bleeding and calculus deposit. From this, we believed that they needed to acquire proper skill of brushing in order to improve their oral hygiene. However, the need for dental caries related treatment was lower compared to our expectation. In fact, most of them just needed a few preventive treatment items like fissure sealants and fluoride varnish application. Only a few teenagers needed ART restorations or composite restorations. The poor oral hygiene habits and status in most of the teenagers may also be related to their exclusion from the SDCS.

6.4. Dental Treatment

Before delivering the treatments to the teenagers, we had prepared a certain level of uncooperativeness. However, during the delivery of the treatment, they behaved so rigorously that was out of our expectation. We could not even put a mirror into their mouth and they would bite on the operators' fingers or mirror heavily that we had to use mouth prop in order to keep their mouth open. Nevertheless, due to the shortage and the brittleness of the disposable mouth props, we had prepared some mouth opening aids to facilitate our work. These mouth opening aids were actually wooden sticks wrapped with gauze. We found that it was a good alternative beside mouth prop in this situation.

In order to deal with the un-cooperative teenagers who had excessive body movement during treatment, those teenagers were tied up with 3 - 5 soft restrainers by the staff to control their body movement. According to the registered nurse, this was a more preferred method rather than using general anaesthesia (GA) because a long period of decline in cognitive ability have been observed after the treatments from those teenagers who were under GA.

From the experience of the first day of the treatment, most of the teenagers moved so much that the operator needed to change their working position frequently. And this resulted in the problem of blocking of the lighting from the dental light by both the patients and the operator. Also, the strong dental light may cause the teenagers became more anxious. In order to avoid these problems, disposable dental mirrors with handles which could emit LED light were used on the second day of the treatment and it was found that they were useful in treating those patients with excessive body movement as the operators could have the lighting always on the views they were looking at.

It was found that positive feedback from the operators, the caretakers and parents were important for the teenagers to behave well because they knew that we appreciated their behaviors rather than refusal. The feedback could be in the form of praises, encouragement and giving small prizes such as stickers!!

6.5 Post-Treatment

After the delivery of treatment, we visited them again in their classrooms and distributed small prizes like the stickers and toothpastes. The prizes not only served as an encouragement, but also gave them a good impression for receiving dental treatment.

7. CONCLUSIONS

After conducting this project, the following conclusions were drawn:

1. Most of the teenagers in this study did not have a high level of dental caries, however the oral hygiene status was generally poor. A number of the teenagers had some untreated caries lesions and many of them had dental calculus. Thus, there was still a need for prevention and special mode of dental service for this special group of children and teenagers in Hong Kong.

2. The Oral health education program was well-received. The participants including the teenagers, their parents, and the care-takers responded well to the interactive method of OHI tutorial and games.

3. Provision of topical fluoride varnish application, fissure sealants and ART restorations was accomplished satisfactorily using portable equipment. However, providing scaling to the teenagers was difficult due to their exaggerated response caused by discomfort. This outreach dental service was welcomed by the service recipients.

8. RECOMMENDATIONS

1. The government can help improving the poor oral health status of the mentally-retarded people by:
   a. Educating the public to increase the dental awareness of the mentally-retarded people, especially their parents and care-takers, regarding the proper oral hygiene measures and its importance to their quality of life.
   b. Extending School Dental Care Service (SCDS) period for the mentally-retarded teenagers to secondary school.

2. Dental undergraduates and graduates should be trained and encouraged to provide dental care for these patients and those services for them should be integrated into the general community services.

9. ACKNOWLEGEMENT

We would like to express our sincere gratitude to the registered nurse and staffs in TWGHs Kwan Fong Kai Chi School for their indispensible assistance in this project, in particular:

- Ms. Wong, registered nurse of TWGHs Kwan Fong Kai Chi School

We would also like to thank our three teacher advisors for their valuable advice and guidance to our project:

- Prof. Edward C. M. Lo
- Dr. May C. M. Wong
- Dr. Conson Yeung

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Appendix 1

Mr. Yau
The Principal
TWGHs Kwan Fong Kai Chi School
28 Nam Shan Chuen Road,
Tai Hang Tung
Shek Kip Mei
Kowloon 20th Jan, 2006

Dear Mr. YAU,

We are a group of Year 4 Dental Teenagers in the University of Hong Kong, writing to invite your school to participate in our Community health project entitled “Oral Health Care for Mentally-retarded Teenagers”.

Community health project is a teenager group exercise that works on a dental public health issue together with the community involved, and by conducting such kind of project is a very important part of our training in dentistry.

Mentally-retarded people have higher risk for dental diseases like tooth decay as they have lower eligibility in acquiring proper oral health maintenance. So, the aim of our project is to deliver outreach dental services for moderately mentally-retarded teenagers of special school.

Our project involves clinical dental examination, provision of dental treatments, and oral hygiene instruction like the proper tooth-brushing technique to your teenagers. The proposal of our community health project is enclosed with this letter, please kindly read for your reference.

We would be grateful if you could render your invaluable participation to our project. Should you have any enquiries, please feel free to contact Mr Gary, So cheuk-hang (96632584). We look forward to your valued reply. Thank you for your time and consideration.

Yours truly,

May C M Wong Supervisor of project Assistant professor Dental Public Health Faculty of Dentistry The University of Hong Kong	So Cheuk Hang Teenager representative Group 4.1 Faculty of Dentistry The University of Hong Kong

Title
Oral Health Care for Mentally-retarded Teenagers

Aims and Objectives:

1. To examine and evaluate the oral health status of moderately mentally-retarded teenagers in a special school
2. To provide an oral health talk to people with moderately mentally-retarded teenagers, their parents and caretakers.
3. To deliver dental treatment to moderately mentally-retarded teenagers in a special school.
4. To study the feasibility of outreach dental care service to moderately mentally-retarded teenagers.

Details
Target group:
Moderately mentally-retarded teenagers (about 40-50) in a special school

Oral health talk:
Date: 21 Feb 06 (Tue)
Format:
Oral health care talk and small group demonstration

Examination and treatment:
Date: 27 Feb 06 (Mon) and 1 Mar 06 (Wed)
Format:

> All patients under examination should have their parents' consent form signed and medical history checked.
> Clinical examination of patient is given by dental teenagers under the supervision of a registered dentist
> Preventive measures will be given as follows: oral hygiene instruction, teeth cleaning, topical fluoride application and dietary advice.
> Decayed tooth will be treated when indicated.
> Questionnaire will be given to caretakers and parents will be given during the oral health talk, concerning the oral health condition of patients.

Appendix 2

通告

敬啓者：

香港大學牙醫學院四年級學生將於二零零六年二月至三月期間， 免費為 東華三院群芳啓智學校學生進行牙齒檢查及教授正確刷牙方法，並會於二月二十一日下午於校內舉行講座藉以提供口腔衛生教育及推廣口腔衛生知識。

是次活動目的是希望他們能掌握正確刷牙方法及應有的口腔衛生知識，從而改善他們的口腔狀況。

請各家長踴躍參與講座，並填妥以下回條，以便參考。

此致

貴家長

香港大學牙醫學院

二零零六年二月十四日

回條

本人同意 / 不同意 子女 _____ (姓名)，_____ (班別) 參加是次口腔衛生及牙齒檢查活動。

本人並提供子女的病歷如下： (請在合適項目加 √)

□ 心臟病
□ 血病
□ 先天性疾病　　請註明：_____
□ 對藥物敏感　　請註明：_____
□ 現正接受醫藥治療 請註明：_____
□ 其他相關病歷： _____

_____　　日期：_____

(家長 / 監護人簽署)

Notice

Dear parents**,**

Fourth-year students from the Faculty of Dentistry, The University of Hong Kong will provide free dental check-up and instruction to oral hygiene to the teenagers of TWGHs Kwan Fong Kai Chi School, from February to March. An oral health talk will also be given in the afternoon on 21st April, 2006 in the school assembly hall to promote oral health education.

The aim of this project is to teach the teenagers the correct toothbrushing technique so as to improve the oral health condition of the teenagers.

Please fill in the reply slip below for our reference if you are interested in the above-mentioned project.

Yours truly,

Faculty of Dentistry, The University of Hong Kong

Reply slip

I hereby agree / disagree my child _____ (Name), _____ (Class) to join the above-mentioned oral health project.

Here is the medical history of my child: (Please tick √ if appropriate)

- □ Heart Disease
- □ Haematological disease
- □ Congenital disease Please specify : _____
- □ Drug allergy Please specify : _____
- □ Currently undergoing medical treatment Please specify :_____
- □ Other related issues : _____

Signature: _____ Date: _____
(Parent / Guardian)

Appendix 3

香港大學牙醫學院口腔衛生問卷調查

學生姓名: _____ 班別: _____

性別: 男 / 女 年齡: _____

1. 貴子女有沒有每年到牙醫檢查?

☐ 有
☐ 沒有

2. 貴子女通常到那裡看牙醫?

☐ 私家牙科診所
☐ 政府牙科診所
☐ 志願團體牙科診所
☐ 其他, 請註明: _____

3. 貴子女每日的刷牙次數?

☐ 沒有/間中
☐ 每日一次
☐ 每日二次
☐ 二次以上

4. 貴子女是否自行刷牙?

☐ 是 (跳至第 6 題)
☐ 否

5. 貴子女何故不由自己刷牙?

☐ 未能掌握刷牙方法
☐ 手部不夠靈活
☐ 其他, 請註明: _____

6. 貴子女除了三餐正餐外, 一天還會進食多少次零食/飲品 (除清水以外)

☐ 沒有
☐ 一次
☐ 二次
☐ 三次或以上

7. 貴子女進食以下食物的次數?

i. 甜品、糖

☐ 從來沒有 / 很少
☐ 一星期一兩次
☐ 每日一次
☐ 每日數次

ii. 薯片、花生

☐ 從來沒有/ 很少
☐ 一星期一兩次
☐ 每日一次
☐ 每日數次

iii. 果汁、汽水

☐ 從來沒有/ 很少
☐ 一星期一兩次
☐ 每日一次
☐ 每日數次

8. 閣下認為 貴子女有沒有以下口腔問題?

☐ 並沒有口腔問題
☐ 牙周病
☐ 蛀牙
☐ 口氣
☐ 其他:_____

9. 貴子女在以往接受牙科服務時有沒有以下問題?

☐ 沒有問題
☐ 貴子女未能遵從牙醫指示
☐ 設施未能配合貴子女的需要
☐ 價錢太貴
☐ 其他:_____

10. 閣下認為政府對弱智人仕的牙科服務方面有沒有改善空間?

_____

_____

_____

多謝完成此問卷!

Oral Health Survey

Name of Student: _____ Class: _____

Gender: Male / Female Age: _____

1. **Does you child attend annual dental-up?**
   - ☐ Yes
   - ☐ No

2. **What sort of dentist does he/she visit in general?**
   - ☐ Private Dental Clinic
   - ☐ Government Dental Service
   - ☐ Charitable Organization Dental Clinic
   - ☐ Others, Please specify : _____

3. **How often does your child brush his/her teeth?**
   - ☐ Never / Occasionally
   - ☐ Once a day
   - ☐ Twice a day
   - ☐ More than twice a day

4. **Does your child brush on his/her own?**
   - ☐ Yes (Please go to Question 6)
   - ☐ No

5. **Why don't your child brush on his/her own?**
   - ☐ Poor grid of the toothbrushing method
   - ☐ Manual dexterity
   - ☐ Others, Please specify:_____

6. **How many times does your child have snacks in between the meals per day? (Except water)**
   - ☐ Never
   - ☐ Once
   - ☐ Twice
   - ☐ More than twice

7. What is the frequency of your child in taking the following?

i. Desserts, candies

- ☐ Never / Occasionally
- ☐ One to two times a week
- ☐ Once a day
- ☐ Several times a time

ii. Potato chips, peanuts

- ☐ Never / Occasionally
- ☐ One to two times a week
- ☐ Once a day
- ☐ Several times a time

iii. Fruit juice, soft drinks

- ☐ Never / Occasionally
- ☐ One to two times a week
- ☐ Once a day
- ☐ Several times a time

8. Do you think your child have the following dental problems?

- ☐ No dental problems at all
- ☐ Gum disease
- ☐ Tooth Decay
- ☐ Bad Breath (halitosis)
- ☐ Others: _____

9. Have you child experienced any of the following problems when seeking dental care before?

- ☐ No problems at all
- ☐ My child cannot follow the instructions by the dentist
- ☐ The facilities in the dental clinic cannot meet the need of my child
- ☐ Too expensive
- ☐ Others: _____

10. Do you think the government has any room for improvement regarding dental care for the mentally-retarded people?

_____

_____

_____

Thanks for your help!

Appendix 4

Name	Quantity
Fibre optic torch	2
Portable light	2
Dental chair	2
Autoclave	1
Lobisept	2 bottles
Disposable gown	20
Facemask	1 box
Gloves (XS, S, M)	1 box (XS), 2 boxes (S)
Cotton roll	4 packs
Cotton bud	1 bag
Gauze	1 pack
Paper towel	2 rolls
Bibs	50
Dappen dish	50
Articulating paper	1 pack
Duraphat	3 tubes
Protective glasses	4
Mouth prop.	10
Mouth prop. (disposable)	40
Scaling kit	5
Straight probe	20
Periodontal probe	20
Tweezers	20
Mouth mirror	20
ART kit (Ketac-Molar Easymix, 3MEPSE).	2

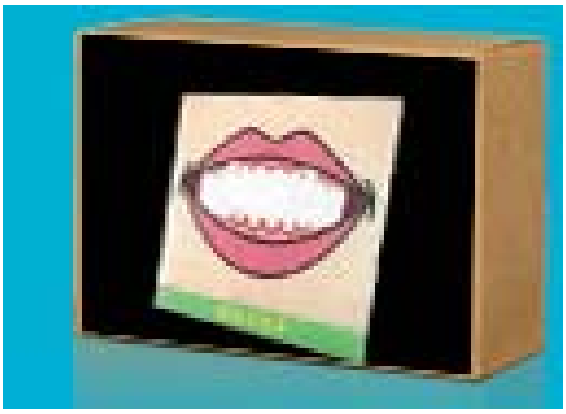
Appendix 5

Brochures: Children with disabilities can also enjoy good oral health-cues for parents
Oral Health Education Unit code: B029
http://www.toothclub.gov.hk/chi/pdf/booklet_pdf/B029.pdf

Appendix 6a

Toothbrushing model and toothbrush
Oral Health Education Unit code: A008A, A008B, A008C, A008D
http://www.toothclub.gov.hk/en/en_home_01_02_03.html

Appendix 6b



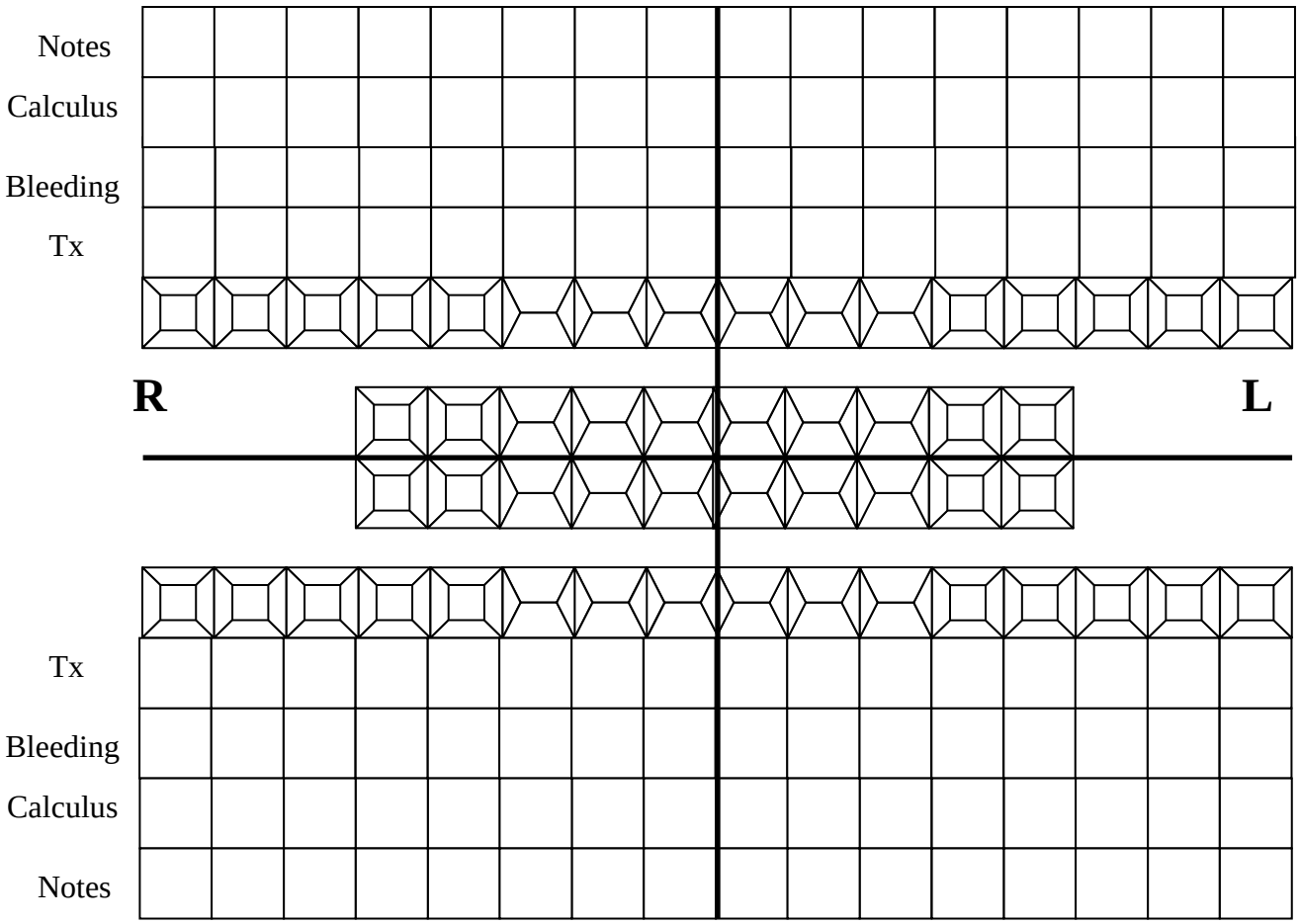
名稱：刷得有道理
目的：認識清潔牙齒的部位
玩法：用牙刷把貼在牙齒上的污垢清除。
口腔健康教育組編號：G031
Name of the Game: Reasonable Toothbrushing
Aim: To get familiar to sites needed to be brushed
Rule: Use the toothbrush to brush away plaque which sticks on the teeth surfaces
Oral Health Education Unit code: G031
http://www.toothclub.gov.hk/chi/home_01_02_01.html

名稱：牙科診所對一對
目的：讓幼兒 /小朋友認識牙科診所、牙醫及牙醫用具
玩法：根據砌圖方塊的形狀完成砌圖 。
口腔健康教育組編號：G026
Name: Dental Clinic Matching!
Aim: To let children get familiar with the dental clinic, dentist and dental equipments
Direction: Put the dental equipments, dental chair and protective clothing at appropriate positions.
Oral Health Education Unit code: G026.
http://www.toothclub.gov.hk/chi/home_01_02_01.html

Appendix 7

Clinical Assessment Form

Name: _____ Class: ____ Age: ___ Sex: M / F Date:
Examiner: 1 / 2



Bleeding: 1 = Presence; 2 = Absence
Calculus: 1 = Supragingival; 2 = Subgingival

Remarks:

Appendix 8

香港大學牙醫學院口腔衛生計劃 2006

牙齒檢查記錄

致 _____ 家長，

於二零零六年二月二十七日的牙齒檢查中，我們發現 貴子女有以下情況：

- ❑ 蛀牙 _____
  - ○ 初期
  - ○ 中期
  - ○ 後期
- ❑ 牙肉發炎
- ❑ 牙石
- ❑ 口腔衛生情況不理想
- ❑ 其他：_____

我們提供的治療：

- ❑ 氟化物塗劑 (作用：治療早期蛀牙)
- ❑ 牙紋防蛀劑 (作用：防止蛀牙)
- ❑ 洗牙
- ❑ 補牙 _____
- ❑ 臨時補牙

另外，我們建議：

- ❑ 盡快請牙醫就 _____ 進行治療
- ❑ 加強注意 貴子女的口腔衛生情況

備註: _____
_____

香港大學牙醫學院
二零零六年三月一日

Appendix 8

Community Health Project 2006

Dental Check-up Record Sheet

1st March, 2006

To the parents/guardians of _____ ,

In the dental check-up delivered on 27th February, 2006, we found out that your child had the following condition(s):

- ❑ Tooth decay _____
  - ○ Early stage
  - ○ Middle stage
  - ○ Late Stage
- ❑ Gum inflammation
- ❑ Calculus
- ❑ Poor oral hygiene
- ❑ Others：_____

Treatment (s) we provided:

- ❑ Fluoride varnish (Used for arresting early tooth decay)
- ❑ Fissure sealant (Used for preventing tooth decay)
- ❑ Scaling
- ❑ Restoration _____
- ❑ Temporary restoration

Besides，we suggest:

- ❑ Please consult dentist to provide treatment for _____ as soon as possible
- ❑ Please take more concern on your child's oral hygiene condition

Remarks: _____
_____

Faculty of Dentistry
The University of Hong Kong